



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/248,768

02/12/99

BABIKIAN

D

SVG-771

EXAMINER

QM02/0607

FORD, J

ART UNIT

PAPER NUMBER

ROBERT MOLL
1173 ST CHARLES COURT
LOS ALTOS CA 94024

3743

DATE MAILED:

06/07/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/248768

Applicant(s)

Babikian et al.

Examiner

Ford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9-8-00 & 9-25-00
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 13-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 49+10
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 49+10
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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HW

Applicants' election of claims 1-12 (Group I) and the species of Figure 1, without traverse, is acknowledged (Paper No. 7, May 15, 2000). Three IDS statements have been received (Paper No. 4, 4-26-99, Paper No. 9, 9-8-00 and Paper No. 10, 9-25-00). Initialed IDS forms are returned with this action.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weitman (4,574,062).

Weitman discloses a saturator 1 and a reheater 2. Temperature sensor 12 controls valve 13 to cool the saturator temperature (such that air emerging from the saturator is at 100% RH and at the temperature set by 12). The air is reheated by heater 11 under the action of temperature sensor 14 to attain a desired relative humidity. In particular, read column 4, line 47 - column 5, line 33 of Weitman for a full explanation of the process. Figure 1 is schematic in

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nature. Figures 2 and 3 show different constructions for the saturator stage 1. It is these latter Figures 2 and 3 which show a contactor having "contact media" comprising coils 18. Liquid from the top of tubes 24 is mixed with gas flowing upward through inlet 22 (Figure 2). No "chiller" is shown in Weitman but it must inherently exist for the system to operate as disclosed in column 5, lines 23-30 (i.e. the air is cooled by the heat transporting fluid). While no "controller" is explicitly disclosed, one is clearly contemplated in column 5, line 6-13.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitman as applied to claims 1 and 7 above, and further in view of Izumi (JA 0213136).

Izumi discloses a chiller 29 in closed circuit communication with a coil in saturator 3. Izumi, like Weitman, teaches controlling humidity by means of controlling the heating done in reheater 4. To have equipped Weitman with a closed circuit chiller such as disclosed by Izumi at 29 to cool the cooling coils 18 of Weitman would have been obvious to one of ordinary skill in the art.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 1 and 7 above, and further in view of Sanpei (JA 5-256468).

To have used the aforementioned prior art to condition semi-conductor clean rooms would have been obvious in view of the teachings of Sanpei.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 1 and 7 above, and further in view of Hashimoto (5,326,316) or Takenami (JA 62-268941) or Nishiki (JA 62-77534) or Yamashita (JA 61-24933).

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Each of these references disclosed filters normally associated with semi-conductor clean rooms. To have used these conventional filters when adapting the prior art to condition semi-conductor clean rooms would have been obvious to one of ordinary skill.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claims 1 and 7 above, and further in view of Truhan (3424231).

Truhan teaches temperature controller 66 for the constant temperature air saturator and controller 49 for the constant temperature reheater. These controllers maintain the air at a precisely controlled relative humidity and temperature automatically.

To have used such controls in the prior art to Weitman or Izumi to control the temperature and RH automatically would have been obvious.

Claims 1, 2, 7, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 1 and 7 above, and further in view of Curtis et al. (4,044,078).

Curtis teaches a chiller 27 in recirculating type air saturator 6. To have substituted the recirculating chiller/saturator of Curtis for the corresponding saturators for the prior art would have been obvious to achieve homogeneous saturation.

Claims 1, 2, 3, 7, 8, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claim at least claims 1 and 7 above, and further in view of Powers (3533607).

Powers shoes a liquid distributor (see Figure 2) in which the reactive force of the liquid rotates the distributor. To have added/substituted such a distributor to the prior art to improve

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liquid distribution to the solid media and thereby improve the degree of saturation would have been obvious.

Claims 1-4, 7-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claim at least claims 1 and 7 above, and further in view of Asakawa (5086829) or Litzberg (4,951,738).

Asakawa & Litzberg each teach two electronic level sensors to maintain liquid levels between to set limits. To have used such conventional electronic level controllers in the prior art to maintain the water in the sump at the required level for operation would have been obvious.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the prior art as applied to claim 1 above, and further in view of Weibert, Jr. (2828761).

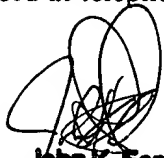
Weibert discloses a system which prevents scale build-up in a direct contact cooling system (such as disclosed in the prior art) by periodically draining the lime-concentrated liquid and refilling the sump with fresh water.

To have used the system of Weibert to periodically renew the water in the sumps in any of the prior art systems to keep them operating properly would have been obvious to one of ordinary skill.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication should be directed to John Ford at telephone number
(703) 308-2636.



John K. Ford
Primary Examiner

May 31, 2001

J. Ford/els